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EXAMINER	
PIERRE, MYRIAM	
ART UNIT	PAPER NUMBER
2654	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)
	09/990,847	BURNETT, GREGORY C.
	Examiner	**Art Unit**
	Myriam Pierre	2654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 12/02/2004.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-23 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-23 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's Amendment filed 12/02/2004, responding to the OA of 08/02/2004, amended claims 1-3 and new claims 4-23, argued to transverse the rejection of claims 1-3, and amended page 6 line 16; page 7 line 24; page 8 lines 8-16; page 20 lines 9-16; and page 21 line 2.

Response to Arguments

2. The applicant's arguments have been fully considered by they are not persuasive for the following reasons:

The applicant attempts to traverse claims 1-3 by arguing against the anticipation by Holzrichter (5,729,694), citing that Holzrichter does not teach a pulsed excitation function, however, Holzrichter teaches ("voiced excitation" col. 21 line 1 and discloses that the human vocal tract produces excitation from pulses (from air pressure), col. 9 lines 32-34), thus Holzrichter teaches pulsed excitation function, which is cited in claim 1 and the new claim 9.

Applicant argues that Holzrichter does not teach the elements of claim 1, however, Holzrichter teaches the elements in claims 1 and newly independent claim 9, as cited in prior art:

> receiving movement information of at least one tissue type associated with human voicing activity, ("Glottal tissue includes vocal fold tissue and surrounding tissue", column 6, lines 4-5 and "works for all human speech sounds and languages", column 6, lines 11-12) wherein the movement information comprises position versus time information (see Fig 9B), wherein the at least one tissue type includes human tissue that vibrates with opening and closing of vocal folds ("including repetitive motions of the vocal folds", column 5 lines 61-63; "glottal open/close cycles are same as vocal fold open/close cycles", column 6, lines 4-7);
>
> generating pressure information using at least one derivative of the movement information ("air sensors in various locations to calibrate...pressure versus time signals, measuring both...under...speech vocabulary...These methods are valuable for obtaining glottal open and closure times and the shape (derivatives) of the air flow versus time signal", column 21, lines 45-55),

identifying opening times and closing times of the vocal folds using the pressure information ("pressure versus time signal", column 21, lines 49-52),

constructing the pulsed excitation function by generating a curve including negative amplitude pulses at times corresponding to the closing times and positive amplitude pulses at times corresponding to the opening times; ("... excitation function feature vector formation, either a pattern (or curve fit) of the spectrum can be stored...column 30 , lines 36-37; "...It measures...wave reflection from the vocal folds and surrounding glottal tissue as they open and close...determine...glottal opening during the voicing of each voiced acoustic speech unit...measure and generate...an accurate voiced speech excitation function" ... Figure 15B; column 21, lines 8-15) and inherently adjusting amplitudes and widths of the negative amplitude and positive amplitude pulses to match speech output of the human vocal tract.

Applicant argues Holzrichter fails to teach computer readable medium, however, Holzrichter teaches a computer readable medium (computer, col. 10 line 12) having instructions stored thereon (inherent in the basic function of a computer), which when executed, cause a processor to calculate a plurality of human speech parameters (col. 10 lines 7-8, dividing up vocal tract into segments, this is done via a computer, and the vocal tract transfer function is a parameter of human speech), including constructing a pulsed excitation function by generating a curve (sound waves from an excitation source, col. 10 line 10 and Fig. 4 has pulse waves) including negative amplitude pulses at times corresponding to closing times of vocal folds and positive amplitude pulses at times corresponding to open times of vocal folds (Fig. 4, 14-15, and 15B).

Claims 2-3 and newly amended claims 10-14 are rejected because they depend on their respective independent claims 1 and 9.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-8, 14-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Holzrichter ().

Regarding Claim 1, Holzrichter teaches

receiving movement information of at least one tissue type associated with human voicing activity, ("Glottal tissue includes vocal fold tissue and surrounding tissue", column 6, lines 4-5 and "works for all human speech sounds and languages", column 6, lines 11-12) wherein the movement information comprises position versus time information (see Fig 9B), wherein the at least one tissue type includes human vocal tract tissue (col. 6 lines 4-6) that vibrates with opening and closing of vocal folds ("including repetitive motions of the vocal folds", column 5 lines 61-63; "glottal open/close cycles are same as vocal fold open/close cycles", column 6, lines 4-7);

generating pressure-related information using at least one derivative of the movement information ("air sensors in various locations to calibrate…pressure versus time signals, measuring both…under…speech vocabulary…These methods are valuable for obtaining glottal open and closure times and the shape (derivatives) of the air flow versus time signal", column 21, lines 45-55, pressure "related" information is demonstrated in the pressure vs time analysis),

identifying opening times and closing times of the vocal folds using the pressure-related information ("pressure versus time signal", column 21, lines 48-52),

constructing the pulsed excitation function by generating a curve including ~~negative-amplitude~~ pulses at times corresponding to the closing times of the vocal folds

and ~~positive amplitude~~ opposite polarity (Fig. 3)pulses at times corresponding to the opening times of the vocal folds (Fig. 3) ("… excitation function feature vector formation, either a pattern (or curve fit) of the spectrum can be stored…column 30 , lines 36-37; "…It measures…wave reflection from the vocal folds and surrounding glottal tissue as they open and close…determine…glottal opening during the voicing of each voiced acoustic speech unit…measure and generate...an accurate voiced speech excitation function" … Figure 15B; column 21, lines 8-15; and col. 6 lines 4-6); and

inherently adjusting amplitudes and widths of the ~~negative amplitude and positive amplitude~~ opening and closing pulses to match speech output of the human vocal tract (col. 6 lines 4-6).

Regarding claim 2, Holzrichter teaches

determining parameters of the human vocal tract tissue (col. 6 lines 4-6) by inherently applying a simple harmonic oscillator model to the constructed pulsed excitation function, wherein the parameters include mass, elasticity, and damping (col. 39 lines 54-61); and

constructing a model of the human vocal tract tissue (col. 6 lines 4-6) using the parameters ("opening amplitudes, mass constants from pitch, damping, and compliance from sympathetic tissue vibration", column 39, lines 54-61)

Regarding claim 3, Holzrichter teaches

the constructed pulsed excitation function, wherein the human speech parameters include voiced excitation functions, ("human voiced excitation function used during each glottal open/close period of voiced speech", column 26, lines 2-5;), voicing states

(inherent in voiced or unvoiced excitation functions, column 21, line 12 and column 30, line 20), pitch periods ("...described by the pitch period..."column 26, lines 31-35), vocal tract transfer functions ("...vocal tract transfer function obtained by de-convolving the excitation function...", column 7, lines 58-64), ~~and~~ tracheal wall parameters (characteristic dimensions of vocal folds, glottal impendence, Fig 13A-F and Fig 16, column 23, lines 34-36, glottal size and compliance, lung air pressure, and related parameters, column 2, lines 22-29), and the pressure-related information (col. 21 lines 45-54).

As to claim 4, Holzrichter teaches

adaptive algorithm (Kalman filter, col. 25 lines 16-18) to select optimal values for pulse amplitude and width parameters (glottal width), and parameters of simple harmonic oscillator model (signal contributions, col. 6 line 18-19, col. 25 line 17, col. 19 lines 42-43, signal contributions such as pulse formant, glottal width parameter used in equation 4, and fundamental harmonics).

As to claim 5, Holzrichter teaches

receiving a signal representative of movement of a human vocal tract, including a glottal-area electromagnetic micro-power sensor signal (col. 5 lines 10-13; col. 5 lines 22-25 and col. 6 lines 4-6, obtaining EM sensor and acoustic information, glottal tissue, thus EM sensor includes glottal area).

generating at least one of the first derivative and a second derivative of the GEMS (Fig. 6 element 61, vocal fold sensor) signal (EM speech organ position or velocity

information (vocal folds), col. 61 lines 61-62; col. 21 lines 54-58; and col. 6 lines 50-53, glottis information from EM speech give a GEMS signal); and

determining pulse locations using at least one of the peaks and zero crossings (Figs. 3-4 and 14).

As to claim 6, Holzrichter teaches

placing pluses having a desired amplitude and width at the determined pulse points (Fig. 3)

As to claim 7, Holzrichter teaches

desired amplitude and width are determined using at least one process selected from a group comprising, trail and error processes, and adaptive processes (col. 34 lines 54-59 and col. 27 lines 32-39).

As to claim 8, Holzrichter teaches

applying a mathematical model to the pulsed excitation function, wherein the mathematical model comprises at least a simple harmonic oscillator model, to generate an output signal that simulates the movement of the human vocal tract during speech production (col. 7 lines 65-67 and col. 8 lines 1-5);

comparing the output of the mathematical model to the original signal representative of movement of a human vocal tract used to calculate the pulsed excitation function (col. 8 lines 2-4);

generating correct parameters using at least one of a trail and error method (speech correction, col. 5 line 6; col. 21 lines 57-64; and col. 24 lines 39-40)

As to claim 14, Holzrichter et al. teach

human speech parameters includes voiced excitation functions (**human voiced excitation function used during each glottal open/close period of voiced speech, column 26, lines 2-5**), voicing states (**inherent in voiced or unvoiced excitation functions, column 21, line 12 and column 30, line 20**), pitch periods (**described by the pitch period, column 26, lines 31-35**), vocal tract transfer functions (**vocal tract transfer function obtained by de-convolving the excitation function, column 7, lines 58-64**), the pressure-related information, and tracheal wall parameters (col. 44 lines 1-5 and).

voiced excitation functions, ("human voiced excitation function used during each glottal open/close period of voiced speech", column 26, lines 2-5;), voicing states (inherent in voiced or unvoiced excitation functions, column 21, line 12 and column 30, line 20), pitch periods (described by the pitch period, column 26, lines 31-35), vocal tract transfer functions (vocal tract transfer function obtained by de-convolving the excitation function, column 7 lines 58-64), tracheal wall parameters (characteristic dimensions of vocal folds, glottal impendence, Fig 13A-F and Fig 16, column 23, lines 34-36, glottal size and compliance, lung air pressure, and related parameters, column 2, lines 22-29), and the pressure-related information (col. 21 lines 45-54).

As to claim 15, Holzrichter et al. teach

a computer-readable medium having instructions stored thereon, which when executed, cause a processor to calculate a plurality of human speech parameters, wherein calculating comprises:

receiving movement information of at least one tissue type associated with human voicing activity, wherein the movement information comprises position versus time information, wherein the at least one tissue type includes human tissue that vibrates with

opening and closing of vocal folds (col. 10 lines 12-16, col. 61 lines 61-64 and col. 9 lines 44-47; computer keeps track of transmission and other propagation features, which includes movement information, vibration information relating to opening and closing of vocal folds, the computer process calculates voice features/propagating features, and consequently the parameters listed herein);

generating pressure-related information using at least one derivative of the movement information (col. 10 lines 12-16 and column 21, lines 45-55, pressure "related" information is demonstrated in the pressure vs. time analysis).

identifying opening and closing times of the vocal folds using the pressure related information (col. 10 lines 12-16 and column 21, lines 45-55, pressure "related" information is demonstrated in the pressure vs. time analysis);

constructing the pulsed excitation function by generating a curve including pulses at times corresponding to the closing times and opposite polarity (Fig. 3) folds-opening pulses at times corresponding to the opening times (col. 10 lines 12-16 and column 21, lines 45-55, Figure 15B; column 21, lines 8-15; and col. 6 lines 4-6); and

inherently adjusting amplitudes and widths of the folds-closing and folds-opening pulses to match speech output of the human vocal tract (col. 6 lines 4-6).

As to claim 17, Holzrichter et al. teach

determining parameters of the human vocal tract (col. 6 lines 4-6) by inherently applying a simple harmonic oscillator model to the constructed pulsed excitation function, wherein the parameters include mass, elasticity, and damping (col. 39 lines 54-61, and col. 10 lines 12-16 computer keeps track of transmission and other propagation

features, which includes movement information, vibration information relating to opening and closing of vocal folds); and

constructing a model of the human vocal tract (col. 6 lines 4-6) using the parameters ("opening amplitudes, mass constants from pitch, damping, and compliance from sympathetic tissue vibration", column 39, lines 54-61, and col. 10 lines 12-16)

As to claim 18, Holzrichter et al. teach

calculating the plurality of human speech parameters further includes determining voiced speech parameters using the constructed pulsed excitation functions (human voiced excitation function used during each glottal open/close period of voiced speech, column 26, lines 2-5), wherein the human speech parameters includes voice excitation functions (column 26 lines 2-5) voicing states (inherent in voiced or unvoiced excitation functions, column 21, line 12 and column 30, line 20), pitch periods (described by the pitch period, column 26, lines 31-35), vocal tract transfer functions (vocal tract transfer function obtained by de-convolving the excitation function, column 7, lines 58-64), the pressure-related information, and tracheal wall parameters (col. 44 lines 1-5 and col. 10 lines 12-16; the computer process calculates voice features/propagating features, and consequently the parameters listed herein).

As to claim 19, Holzrichter et al. teach

calculating the plurality of human speech parameters further includes using an adaptive algorithm (Kalman filter, col. 25 lines 16-18) to select optimal values for pulse amplitude and width parameters, and parameters of the simple harmonic oscillator model (Kalman filter, col. 25 lines 16-18, col. 6 line 18-19, col. 25 line 17, col. 19 lines 42-43,

signal contributions such as pulse formant, glottal width parameter used in equation 4, and fundamental harmonics).

As to claim 20, Holzrichter et al. teach

calculating the plurality of human speech parameters includes;

receiving glottal-area electromagnetic micro-power sensor, GEMS, (Fig. 6 element 61, vocal fold sensor) signal (EM speech organ position or velocity information (vocal folds), col. 61 lines 61-62; col. 21 lines 54-58; and col. 6 lines 50-53; Fig. 6 element 61, vocal fold sensor);

generating at least one of the first derivative and a second derivative of the GEMS signal (EM speech organ position or velocity information (vocal folds), col. 61 lines 61-62; col. 21 lines 54-58; and col. 6 lines 50-53);

identifying all zero crossing of a raised version of the GEMS signal (ARMA functions, col. 18 lines 14-19, ARMA inherently gives access to poles and zeros, such as the numerator and denominator of H(z), col. 18 lines 2-5); and

determining pulse locations using the zero crossing (col. 9 lines 32-34, Fig. 3, col. 18 lines 14-19, ARMA inherently gives access to poles and zeros, such as the numerator and denominator of H(z), col. 18 lines 2-5).

generating at least one of a first derivative and a second derivative of the GEMS signal (EM speech organ position, velocity information (vocal folds), col. 61 lines 61-62; col. 21 lines 54-58; and col. 6 lines 50-53)

identifying all zero crossing of a raised version of the GEMS signal (col. 18 lines 14-19, ARMA inherently gives access to poles and zeros, such as the numerator and denominator of H(z), col. 18 lines 2-5);

determining pulse locations using the zero crossings (col. 9 lines 32-34, Fig. 3, col. 18 lines 14-19, ARMA inherently gives access to poles and zeros, such as the numerator and denominator of H(z), col. 18 lines 2-5).

As to claim 21, Holzrichter et al. teach

calculating the plurality of human speech parameters further includes placing pulses having a desired amplitude and width at the determined pulse points (Fig. 11a-11b, adaptive processes inherently allow for changes in desired features, such as desired amplitude and width of the speech parameters).

As to claim 22, Holzrichter et al. teach

the desired amplitude and width are determined using at least one process selected from a group comprising, trail and error processes, and adaptive processes (amplitude, adaptive features, col. 41 lines 36-39, column 39, lines 54-61, col. 10 lines 12-16, Kalman filter, col. 25 lines 16-18; col. 34 lines 54-59 and col. 27 lines 32-39, Kalman filter uses adaptive algorithms).

As to claim 23, Holzrichter et al. teach

calculating the plurality of human speech parameters further includes determining parameters of the human vocal tract, including:

applying a mathematical model (H(z))) to the pulsed excitation function, wherein the mathematical model comprises at least a simple harmonic oscillator model, to generate an output signal that simulates the movement of the human vocal tract during speech production (Fig. 3a elements 26-28 and Fig. 9-10, col. 17 lines 20-29, col. 18 lines 10-19, col. 39 lines 54-61; H(z) is a transfer function used to reflect the poles and zeros which represent the changes in vocal folds, transforms used to demonstrate EM glottal opening and areas and acoustic information);

comparing the output of the mathematical model to the original signal representative of the movement of a human vocal tract used to calculate the pulsed excitation function (col. 18 lines 15-20, col. 17 lines 20-30, col. 21 lines 58-64; comparing the output of the math model to the original signal is inherent in codebook processes);

generating corrected parameters using at least one of a trail and error method and an adaptive function that utilizes the output of the mathematical model and the original signal representative of movement of a human vocal tract used to calculate the pulsed excitation function (col. 41 lines 36-39, column 39, lines 54-61, col. 10 lines 12-16, col. 18 lines 15-20, col. 17 lines 20-30, col. 21 lines 58-64; comparing the output of the math model to the original signal is inherent in codebook processes).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holzrichter et al. (5,729,694).

As to claim 9, Holzrichter teaches

at least one sensor for detecting movement information of at least one tissue type associated with human voicing activity (col. 5 lines 10-13; col. 5 lines 22-25 and col. 6 lines 4-6, obtaining EM sensor and acoustic information, glottal tissue, thus EM sensor includes glottal area); and

a processor coupled to the at least one sensor (Fig. 2), wherein the processor is configured to execute a plurality of algorithms (Kalman filter, col. 25 lines 16-18) including at least one algorithm for generating a pulsed excitation function (Fig. 3A, a plurality of algorithms are necessary in a processor), wherein generating the pulsed excitation function comprises,

generating pressure-related information using at least one derivative of the movement information (col. 9 line 34);

identifying opening times and closing times of the vocal folds using the pressure-related information (col. 8 lines 3-5; col. 6 lines 4-6; col. 7 lines 53-58);

constructing the pulsed excitation function by generating a curve including folds-closing pulses at times corresponding to the closing times and opposite polarity folds-opening pulses at times corresponding to the open times (Fig. 3a; pulse generator necessarily constructed pulsed excitation by generating a curve, Fig. 3a-3b demonstrates the apparatus as a function of the movement of the mouth, thus the opening and closing of the mouth).

Holzrichter teach implementing a microphone (acoustic sensor, e.g. microphone, col. 16 lines 14-15; col. 11 lines 29-30) coupled to a processor but does not teach implementing a plurality of microphones.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to implement a plurality of microphones for flexibility, thus gathering acoustic information in various areas instead of implementing one microphone in that is restricted to a certain area.

As to claim 10, Holzrichter et al. teach

one algorithm further comprises a noise suppression algorithm and a speech feature extraction algorithm (several algorithmic methods of coding for speech recognition, speech synthesis, speech transmission, col. 5 lines 37-42; noise suppression and speech feature extraction is inherent to speech recognition algorithm to extract the best speech feature and avoid noise).

As to claim 11, Holzrichter et al. teach

generating the pulsed excitation function further comprising adjusting amplitudes and widths (inherent functions of pulse generators) of the folds-closing and folds-opening pulses to match speech output of the human vocal tract (speech frame includes motions of the vocal folds, col. 5 lines 60-61 and Fig. 3A pulse generator and elements 22-23, and col. 6 lines 3-7; elements 22-23 measure the opening and closing of he folds pulses, which match speech output of human vocal tract modeled in the pulse generator).

As to claim 12 Holzrichter et al. teach

the movement information comprises position verses time information (Fig. 9B), wherein the at least one tissue type includes human tissue that vibrates with opening and closing of vocal folds, and wherein the movement can include vocal fold movement (col. 61 lines 61-64 and col. 9 lines 44-47; pressure pulses cause tissue to vibrate, pressure pulses are from human tissue opening and closing, thus vocal fold movement)

As to claim 13 Holzrichter et al. teach

the processor is configured to:

determine human vocal tract tissue parameters by applying a simple harmonic oscillator model to the constructed pulsed excitation function, wherein the parameters include mass, elasticity, and damping (col. 39 lines 54-61); and

construct a model of the human vocal tract tissue using the parameters (col. 6 lines 4-7, processing unit for speech coding, which includes acoustic sensor to vocal organ, col. 11 lines 18 and 40-44,46-50; thus through speech coding and recognition, the processors model the parameters of the vocal tract tissue).

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-272-8300.

9. Information as to the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MP

06/10/2005

Vijay Chawan

VIJAY CHAWAN
PRIMARY EXAMINER